# EAST Search History

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|---|---|---|---|---|---|---|
| L2 | 1258 | (372/50.1).CCLS. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | OFF | 2006/07/25 11:31 |
| L3 | 2334 | (372/70,75).CCLS. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | OFF | 2006/07/25 11:32 |
| L4 | 49 | 2 and 3 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/07/25 11:33 |
| L5 | 322 | 2 and pump$3 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/07/25 11:33 |
| L6 | 0 | 5 and temperture | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/07/25 11:34 |
| L7 | 198 | 5 and temperature | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/07/25 11:34 |
| L8 | 1238 | "1" and 2 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/07/25 11:34 |
| L9 | 49 | 2 and 3 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/07/25 11:34 |
| L10 | 221 | 7 9 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/07/25 11:34 |

# EAST Search History

| L11 | 218 | 3 and monolithic$4 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/07/25 11:35 |
|---|---|---|---|---|---|---|
| L12 | 32 | 10 and 11 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/07/25 11:35 |
| L13 | 407 | 10 11 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/07/25 11:36 |
| L14 | 362 | l13 and (temperature or heat$3 or heatsink or heat adj sink or (radiant thermal) adj2 energy) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/07/25 11:37 |
| L15 | 9 | ("20020001328" \| "20020075935" \| "5038356" \| "5461637" \| "5747366" \| "5956362" \| "6535537" \| "6542530" \| "6778582").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2006/07/25 12:27 |
| L16 | 4 | ("4897444" \| "5448581" \| "5648979" \| "5748661").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2006/07/25 12:27 |
| L17 | 0 | ("6973113").URPN. | USPAT | OR | ON | 2006/07/25 12:28 |
| L18 | 10 | ("4380076" \| "5131002" \| "5212701" \| "5212706" \| "5231642" \| "5548610" \| "5748653" \| "5796771" \| "5991318" \| "6535537").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2006/07/25 12:28 |
| L24 | 1 | (monolithically adj2 integrated and operation and temperature and radiation and pump and vertical). clm. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/07/25 13:36 |

# EAST Search History

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|---|---|---|---|---|---|---|
| S2 | 1 | "20040141538" | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2005/07/08 17:07 |
| S3 | 9 | vcsel with pump$4 and temperature same monolithical$4 | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2005/07/08 17:09 |
| S4 | 237 | vcsel with pump$4 and temperature | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2005/07/08 17:09 |
| S5 | 135 | vcsel with pump$4 and temperature and epitaxial$2 | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2005/07/08 17:16 |
| S6 | 1 | ("5131002").PN. | US-PGPUB; USPAT; EPO; JPO | OR | OFF | 2005/07/08 17:24 |
| S7 | 2 | (("5,991,318") or ("6,535,537")).PN. | US-PGPUB; USPAT; EPO; JPO | OR | OFF | 2005/07/08 17:25 |
| S8 | 1 | ("5796771").PN. | US-PGPUB; USPAT; EPO; JPO | OR | OFF | 2005/07/08 17:26 |
| S9 | 4 | ("4897444" \| "5448581" \| "5648979" \| "5748661").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2005/07/08 17:43 |
| S10 | 0 | ("6535537").URPN. | USPAT | OR | ON | 2005/07/10 18:50 |
| S11 | 9 | vcsel same pump adj2 (laser or source) and (heatsink or heat adj2 sink) | USPAT | OR | ON | 2005/07/10 18:51 |
| S12 | 9 | ("4205278" \| "4737960" \| "5159605" \| "5301204" \| "5365538" \| "5436919" \| "5463649" \| "5513204" \| "5574738").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2005/07/10 18:53 |
| S13 | 255493 | vcsel same pump same heat adjs sink | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2005/07/10 19:39 |
| S14 | 4 | vcsel same pump same heat adj2 sink | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2005/07/10 19:40 |

| | | | | | | |
|---|---|---|---|---|---|---|
| S15 | 68 | vcsel with heat adj2 sink | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2005/07/10 19:44 |
| S16 | 88 | (vertical adj2 cavity or vcsel) with (heat adj2 sink or heatsink) | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2006/07/24 14:47 |
| S17 | 20 | S16 not S15 | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2005/07/10 19:45 |
| S18 | 198 | (vertical adj2 cavity or vcsel) same (heat adj2 sink or heatsink) | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2005/07/10 20:22 |
| S19 | 110 | S18 not S16 | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2005/07/10 20:38 |
| S20 | 15 | S18 and pump not S16 | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2005/07/10 20:22 |
| S21 | 95 | S19 not S20 | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2005/07/10 20:39 |
| S22 | 51 | S21 not curing | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2005/07/10 20:41 |
| S23 | 6 | heat adj2 sink with top same (vertical adj2 emit$4 or vcsel) | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2005/07/10 20:43 |
| S24 | 69 | heat adj2 sink with (vertical adj2 emit$4 or vcsel) | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2005/07/10 20:43 |
| S25 | 2 | "6535537".pn. and temperature | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/01/27 10:28 |
| S26 | 1615 | (372/50.1-50.11,50.124).CCLS. | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2006/07/24 17:26 |

# EAST Search History

| S27 | 50 | S26 and temperature with pump$4 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/01/27 11:40 |
|---|---|---|---|---|---|---|
| S28 | 98 | (vcsel or vertical adj2 emit$4) same pump$4 same temperature | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/01/27 13:27 |
| S29 | 4 | ("4897444" \| "5448581" \| "5648979" \| "5748661").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2006/01/27 12:54 |
| S30 | 4 | (("5748,653") or ("20020001328")).PN. | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2006/01/27 13:27 |
| S31 | 334 | S26 and vcsel | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/01/27 13:46 |
| S32 | 106 | S26 and vcsel and pump$4 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/01/27 13:47 |
| S33 | 91 | S32 not S28 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/01/27 13:47 |

# EAST Search History

| S34 | 44 | ("3949320" \| "4633476" \| "4878104" \| "4901330" \| "5008717" \| "5023879" \| "5163058" \| "5165065" \| "5216687" \| "5231642" \| "5291502" \| "5351256" \| "5414726" \| "5461637" \| "5485014" \| "5504772" \| "5513204" \| "5536085" \| "5623359" \| "5625635" \| "5627853" \| "5671243" \| "5680411" \| "5754578" \| "5778015" \| "5793787" \| "5796771" \| "5835517" \| "5841799" \| "5914976" \| "5963576" \| "5966234" \| "5976905" \| "5985686" \| "6026108" \| "6054335" \| "6066859" \| "6097742" \| "6104739" \| "6127200" \| "6167068" \| "6195381" \| "6252896" \| "6285704").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2006/01/27 14:01 |
|-----|-----|---------------------------|-----------------------|----|----|-----------------|
| S35 | 9 | ("4205278" \| "4737960" \| "5159605" \| "5301204" \| "5365538" \| "5436919" \| "5463649" \| "5513204" \| "5574738").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2006/01/27 14:25 |
| S36 | 1 | vcsel with temperature and monolithical$4 with pump | US-PGPUB; USPAT; USOCR | OR | ON | 2006/01/27 14:25 |
| S37 | 3 | vcsel with temperature and monolithic$4 with pump | US-PGPUB; USPAT; USOCR | OR | ON | 2006/01/27 14:26 |

| S38 | 50 | ("3949320" \| "4633476" \| "4878104" \| "4901330" \| "5008717" \| "5023879" \| "5163058" \| "5165065" \| "5216687" \| "5231642" \| "5291502" \| "5351256" \| "5414726" \| "5461637" \| "5485014" \| "5504772" \| "5513204" \| "5536085" \| "5623359" \| "5625635" \| "5627853" \| "5671243" \| "5680411" \| "5754578" \| "5778015" \| "5793787" \| "5796771" \| "5835517" \| "5841799" \| "5914976" \| "5963576" \| "5966234" \| "5976905" \| "5985686" \| "6026108" \| "6054335" \| "6066859" \| "6097742" \| "6104739" \| "6127200" \| "6167068" \| "6195381" \| "6252896" \| "6285704" \| "6339607" \| "6347108" \| "6424669" \| "6553048" \| "6556610" \| "6580741").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2006/01/27 14:27 |
|-----|-----|-----|-----|-----|-----|-----|
| S39 | 1 | ("5513204").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2006/01/27 15:09 |
| S40 | 78 | vcsel with optical adj2 pump$4 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/01/30 20:42 |
| S41 | 203 | vcsel with optical$3 adj2 pump$4 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/01/30 20:43 |
| S42 | 146 | vcsel with optical$3 adj2 pump$4 and (temperature or heat) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/01/30 20:43 |
| S43 | 1 | ("5513204").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2006/01/31 13:18 |
| S44 | 134 | (long and short) adj2 wavelength same laser same pump$4 | US-PGPUB; USPAT; USOCR | OR | ON | 2006/01/31 13:19 |

# EAST Search History

| S45 | 0 | (long and short) adj2 wavelength same laser same pump$4 same temperture | US-PGPUB; USPAT; USOCR | OR | ON | 2006/01/31 13:19 |
|---|---|---|---|---|---|---|
| S46 | 20 | (long and short) adj2 wavelength same laser same pump$4 same temperature | US-PGPUB; USPAT; USOCR | OR | ON | 2006/01/31 13:44 |
| S47 | 1582 | (372/38.06,50.1-50.11).CCLS. | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2006/01/31 15:16 |
| S48 | 840 | S47 and temperature | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/01/31 13:48 |
| S49 | 116 | S47 and temperature and optical$2 adj2 pump$4 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/01/31 14:12 |
| S50 | 9 | ("20020001328" \| "20020075935" \| "5038356" \| "5461637" \| "5747366" \| "5956362" \| "6535537" \| "6542530" \| "6778582").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2006/01/31 13:51 |
| S51 | 71 | S47 and heat and optical$2 adj2 pump$4 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/01/31 14:12 |
| S52 | 16 | S51 not S49 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/01/31 14:26 |
| S53 | 0 | "6535537".pn. and since adj2 no adj3 current | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/01/31 14:26 |
| S54 | 257 | S47 and (heatsink or heat adj sink) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/01/31 15:17 |

| S55 | 328 | S47 and (heatsink or heat adj sink or cooling) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/01/31 15:19 |
|---|---|---|---|---|---|---|
| S56 | 27 | (US-20020001328-$ or US-20020176459-$ or US-20030026303-$ or US-20040141538-$ or US-20020075935-$ or US-20050226302-$ or US-20050008056-$ or US-20050036528-$).did. or (US-5159605-$ or US-5513204-$ or US-5748653-$ or US-5754578-$ or US-5796771-$ or US-5812571-$ or US-6026108-$ or US-6252896-$ or US-6285704-$ or US-6424669-$ or US-6434180-$ or US-6535537-$ or US-6553048-$ or US-6580741-$ or US-6636539-$ or US-6940885-$ or US-6973113-$ or US-5461637-$).did. or (US-20020001328-$).did. | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/31 16:58 |
| S57 | 1 | S56 and heatsink | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/01/31 16:59 |
| S58 | 13 | S56 and (heatsink or heat adj sink) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/01/31 16:59 |
| S59 | 612 | (vertical adj2 (emitting or emitter) or vcsel) same pump$4 | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2006/07/24 15:44 |
| S60 | 11 | (vertical adj2 (emitting or emitter) or vcsel) same pump$4 same (heatsink or heat adj sink) | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2006/07/24 14:48 |
| S61 | 129 | (vertical adj2 (emitting or emitter) or vcsel)same pump$3 same (heat or temperature) | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2006/07/24 15:54 |
| S62 | 15 | (optically adj2 pumped and (vcsel or vertical adj3 emitting)).ti. | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2006/07/24 15:55 |

| S63 | 6 | (optically adj2 pumped and (vcsel or vertical adj3 emitting)).ti. and temperature | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2006/07/24 15:56 |
|---|---|---|---|---|---|---|
| S64 | 6 | (optically adj2 pumped and (vcsel or vertical adj3 emitting)).ti. and (temperature or heat) | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2006/07/24 15:56 |
| S65 | 6187 | (372/50.1,50.124,69-72,78,92, 98-99).CCLS. | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2006/07/24 17:27 |
| S66 | 3273 | S65 and (heat or temperature or radiant adj2 energy) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/07/24 17:28 |
| S67 | 1183 | S65 and (heat or temperature or radiant adj2 energy) same pump$3 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/07/24 17:28 |
| S68 | 83 | S65 and (heat or temperature or radiant adj2 energy) same pump$3 and vcsel | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/07/24 17:28 |
| S69 | 43 | S68 not S61 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/07/24 18:57 |
| S70 | 4389906 | vcsel same optically adj2 pumped same heat or (radiant thermal) adj2 energy or temperature | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/07/24 18:58 |
| S71 | 26 | vcsel same optically adj2 pumped same (heat or (radiant thermal) adj2 energy or temperature) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2006/07/25 11:31 |